2/2   011

CIRC ACCESSION NO--AP0123014

PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. S(. ISOTHERMS (40DEGREES) OF COX,UREA,H SUB2 O SYSTEMS WHERE X IS NITRATE OR SULFATE AND OF CO(NO SUB3) SUB2,CO(SO SUB4),UREA,H SUB2 O WERE DETD. AND THEIR DIAGRAMS ARE GIVEN. THE TERNARY SYSTEM OF CO(NO SUB3) SUB2 FORMS 2 NEW COMPDS. CO(NO SUB3) SUB2 .6 UREA AND CO(NO SUB3) SUB2 .10 UREA. CONGRUENTLY SOL. COSO SUB4 .2 UREA .4H SUB2 O FORMS IN THE TERNARY SYSTEM OF COSO SUB4. THE QUATERNARY SYSTEM FORMS CO(NO SUB3) SUB2 .4COSO SUB4 .20 UREA.2H SUB2 O.

BESKROVANOV, V. V.

SPKS 65268
6-13

- 80 -

VI-5. RELATIVE GROWTH RATE OF THE <111> and <100> PYRAMIDS AND DEFECT DISTRIBUTION IN NATURAL DIAMONDS

The relative growth rate of <100> pyramids was determined by the configuration of these pyramids, and the relative growth rate of <111> pyramids was determined by the thickness of the simultaneously growing layers. Diamonds were photographed in the light of their luminescence or the transmitted monochromatic light. The negatives were photometrically measured and the distribution in the <111> and <100> of the relative density of the luminescence or the absorption centers determined. It was established that with an increase in the growth rate of <111> pyramids the density of the centers of blue luminescence in the <111> pyramid 'creases' absent linearly, the correlation factor (c) is equal to 0.9. For centers of yellow and green luminescence, the inverse relation was established between their density in the <100> pyramid and the growth rate of this pyramid, r = 0.85. By .uning with the impurity nature of the luminescence centers nd the Nernlo-N. t law it follows that for an impurity, te ivible for blue luminescence K < 1, and for an impurity responsible for green or yellow luminescence. $K > 1$. K is the distribution factor characterizing the entry of the impurity into the crystal. Beginning with the defect distribution law it follows that the natural diamonds of cubic habit (with yellow and green luminescence characteristic of them) grew with relatively smaller supersaturation than diamonds of octahedral habit (with blue luminescence characteristic of them). The established nonuniformity of the different pyramids <111> and <100> at the same time of their growth for a defined diamond (and the corresponding variations in defect density) is explained as a result of the differences in temperature and supersaturation at different faces of this crystal and also as a result of different defectiveness (dislocation density, face roughness, and so on) of its faces. The investigation of the relation between the density distribution of absorption (N-N) demonstrated the inverse distribution of nitrogen A-centers and the centers of blue luminescence (N-Al) in the <111> pyramids.

1/2   020   UNCLASSIFIED   PROCESSING DATE--16OCT70
TITLE--DEVELOPMENT OF AROMATIC HYDROCARBON INDUCED TUMORS OF THE MAMMARY
   GLAND IN RATS -U-

AUTHOR-(03)-BESKROVNYY, A.M., BRESLAVSKIY, A.S., SUKACHEVA, O.A.

COUNTRY OF INFO--USSR

SOURCE--VOP. ONKOL. 1970, 16(2), 59-63

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TUMOR, CARCINOGEN, AROMATIC HYDROCARBON, HISTOCHEMISTRY,
   REPRODUCTIVE SYSTEM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1995/2042   STEP NO--UR/0506/70/016/002/0059/0063

CIRC ACCESSION NO--AP0117285
                        UNCLASSIFIED

CIRC ACCESSION NO--AP0117285

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A STUDY WAS MADE OF PATTERNS OF
  GROWTH AND HISTOL. STRUCTURE OF TUMORS OF THE AMMMARY GLAND, INDUCED IN
  WISTAR FEMALE RATS BY ORAL ADMINISTRATION OF
  9,10,DIMETHYL,1,2,BENZ(ALPHA)ANTHRACENE (I). THE TUMORS APPEARED AT
  85-90PERCENT OF CASES, IN AN AV. OF 36 DAYS AFTER 3 ADMINISTRATION OF
  THE CARCINOGEN. OF 200 CASES, SPONTANEOUS REGRESSION OCCURRED IN 61
  WITH COMPLETE DISAPPERANCE OF THE TUMOR IN 29. IN 45 CASES, HOWEVER,
  THE REGRESSION WAS TEMPORARY. A DISTINCT DEPENDENCE BETWEEN THE RATE
  OF REGRESSION AND THE SIZE OF THE TUMOR WAS FOUND; SMALLER (I.E.,
  YOUNGER) TUMORS HAD A HIGH INCIDENCE OF REGRESSION AND DISAPPEARANCE.
  WHEN THE TUMOR REACHED A CERTAIN CRIT. SIZE, DISTINCT MALIGNIZATION
  OCCURRED, THE TUMORS GREW CONTINUOUSLY AND CAUSED DEATH OF THE ANIMAL.
  HISTOL. EXAMNS. SHOWED THAT I INDUCED TUMORS ARE INITIALLY PRECANCEROUS,
  AND ONLY BECOME MALIGNANT IN LATER STAGES.   FACILITY: INST. EXP.
  CLIN. ONCOL., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 621.375.4.089.52-503.22:517.27

BESKROVNYY, I. M., ZABASHTA, P. T., NOVIKOV, A. F.

"Sensitivity Optimization of a Transistorized Amplifier with Negative Feedback"

V sb. Poluprovodn. pribory v tekhn. elektrosvyazi (Semiconductor Devices in Electrical Communications Technology--collection of works), Vyp. 5, Moscow, "Svyaz'", 1970, pp 159-165 (from RZh-Radiotekhnika, No 7, Jul 70, Abstract No 7D102)

Translation: Relationships are given which are used to optimize transistorized amplifiers with respect to minimum sensitivity of the transfer coefficient to a change in transistor gain h_{21e} in a common-emitter circuit. Resumé.

1/1

Acc. Nr:
AP0050722

Abstracting Service:
INTERNAT. AEROSPACE ABST 5-70

Ref. Code:
UR 0170

B

A70-23871 #   Solution of unsteady transport problems by the flux method (Reshenie nestatsionarnykh zadach po perenosu metodom potokov). I. M. Beskrovnyi (Akademiia Nauk Kazakhskoi SSR, Institut Iadernoi Fiziki, Alma-Ata, Kazakh SSR). Inzhenerno-Fizicheskii Zhurnal, vol. 18, Jan. 1970, p. 162-166. 6 refs. In Russian.

Description of a system of flux equations which is completely equivalent to the so-called P_1 approximation of the single-velocity Boltzmann equation. The proposed system features a faster solution of unsteady transport problems than that of the diffusion equation. The use of the system is illustrated for problems involving the propagation of a concentration discontinuity through a plane layer.   T.M.

REEL/FRAME
19810720

VORONKIN, M. A. and BESOV, A. V.

"10th All-Union Conference on Powder Metallurgy"

Kiev, Poroshkovaya metallurgiya, No 5, May 71, pp 103-105

Abstract: An account is given of the work of the 10th All-Union Conference on Powder Metallurgy, which was held in Kiev on 19-22 January 1971 and organized by the Scientific Council on Powder Metallurgy, the powder metallurgy section of the Central Administration of the Scientific-Technical Society of the Machinery Industry, the Institute of Problems of Material Science, the Academy of Sciences Ukr SSR and by the Kiev House of Scientific-Technical Propaganda. It was attended by 385 representatives from 98 Soviet cities and 150 organizations. Eighteen survey reports on important problems and trends in powder metallurgy were presented. Twenty-eight reports on problems of the development and introduction of methods for the production of powders, forming the sintering of raw kinds of metal-ceramic materials and items were presented. Particular attention was given to problems of the development and application of metal-ceramic products.

1/1

UNCLASSIFIED PROCESSING DATE--

1/2 011

TITLE--SOLUBILITY IN UREA,COBALT NITRATE,COBALT SULFATE,WATER SYSTEMS AT 40DEGREES -U-

AUTHOR-(02)-KONDRATYEVA, N.G., BESKOV, S.D.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(4), 1090-3

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--COBALT COMPOUND, NITRATE, SOLUBILTIY, SULFATE, UREA

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1112

STEP NO--UR/0078/70/015/004/1090/1093

CIRC ACCESSION NO--AP0123014

UNCLASSIFIED

CIRC ACCESSION NO--AP0123014

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SOLY. ISOTHERMS (40DEGREES) OF COX,UREA,H SUB2 O SYSTEMS WHERE X IS NITRATE OR SULFATE AND OF CO(NO SUB3) SUB2,CO(SO SUB4),UREA,H SUB2 O WERE DETD. AND THEIR DIAGRAMS ARE GIVEN. THE TERNARY SYSTEM OF CO(NO SUB3) SUB2 FORMS 2 NEW COMPDS. CO(NO SUB3) SUB2 .6 UREA AND CO(NO SUB3) SUB2 .10 UREA. CONGRUENTLY SOL. COSO SUB4 .2 UREA .4H SUB2 O FORMS IN THE TERNARY SYSTEM OF COSO SUB4. THE QUATERNARY SYSTEM FORMS CO(NO SUB3) SUB2 .4COSO SUB4 .20 UREA.2H SUB2 O.

UNCLASSIFIED

BESKROVANOV, V. V.

VI-5. RELATIVE GROWTH RATE OF THE <111> and <100> PYRAMIDS AND DEFECT DISTRIBUTION IN NATURAL DIAMONDS

[Article by V. I. Trubin, V. V. Beskrovanov, Yakutsk; Novosibirsk, III Simpozium po Protsessam Rosta i Sinteza Poluprovodnikovykh Kristallov i Plenok, Russia, 12-27 June, 1972, P 76].

The relative growth rate of <100> pyramids was determined by the configuration of these pyramids, and the relative growth rate of <100> pyramids was determined by the thickness of the simultaneously growing layers. Diamonds were photographed in the light of their luminescence or the transmitted monochromatic light. The negatives were photometrically measured and the distribution in the <111> and <100> of the relative density of the luminescence or absorption centers was determined. It was established that with an increase in the growth rate of the <111> pyramids, the density of the centers of blue luminescence in this pyramid increases almost linearly, the correlation factor (r) is equal to 0.9. For centers of yellow and green luminescence, the inverse relation was established between their density in the <100> pyramid and the growth rate of this pyramid, r = 0.88. Beginning with the impurity nature of the luminescence centers and the Berzio-Nernst law it follows that for an impurity responsible for blue luminescence K<1, and for an impurity responsible for green or yellow luminescence K>1, K is the distribution factor characterizing the entry of the impurity into the crystal. Beginning with the defect distribution laws it follows that the natural diamonds of cubic habit (with smaller supersaturations than diamonds of octahedral habit) grew with relatively yellow and green luminescence characteristic of them). The established nonuniformity of the growth rates of characteristic of them). The established nonuniformity of the growth rates of the different pyramids <111> and <100> at the same size of their growth for a defined diamond (and the corresponding variations in defect density) is explained as a result of the differences in temperature and supersaturation at different faces of this crystal and also as a result of different defectiveness (dislocation density, face roughness, and so on) of its faces. The investigation of the distribution of nitrogen A-centers of absorption (N-N) demonstrated the inverse relation between the density distribution of the A-centers and the centers of blue luminescence (N-Al) in the <111> pyramids.

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SPKS 57268
6-13

UNCLASSIFIED   PROCESSING DATE--16OCT70

TITLE--DEVELOPMENT OF AROMATIC HYDROCARBON INDUCED TUMORS OF THE MAMMARY GLAND IN RATS -U-

AUTHOR-(03)-BESKROVNYY, A.M., BRESLAVSKIY, A.S., SUKACHEVA, O.A.

COUNTRY OF INFO--USSR

SOURCE--VOP. ONKOL. 1970, 16(2), 59-63

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TUMOR, CARCINOGEN, AROMATIC HYDROCARBON, HISTOCHEMISTRY, REPRODUCTIVE SYSTEM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/2042   STEP NO--UR/0506/70/016/002/0059/0063

CIRC ACCESSION NO--AP0117285
                            UNCLASSIFIED

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A STUDY WAS MADE OF PATTERNS OF
GROWTH AND HISTOL. STRUCTURE OF TUMORS OF THE AMMMARY GLAND, INDUCED IN
WISTAR FEMALE RATS BY ORAL ADMINISTRATION OF
9,10,DIMETHYL,1,2,BENZ(ALPHA)ANTHRACENE (I). THE TUMORS APPEARED AT
85-90PERCENT OF CASES, IN AN AV. OF 36 DAYS AFTER 3 ADMINISTRATION OF
THE CARCINOGEN. OF 200 CASES, SPONTANEOUS REGRESSION OCCURRED IN 61
WITH COMPLETE DISAPPERANCE OF THE TUMOR IN 29. IN 45 CASES, HOWEVER,
THE REGRESSION WAS TEMPORARY. A DISTINCT DEPENDENCE BETWEEN THE RATE
OF REGRESSION AND THE SIZE OF THE TUMOR WAS FOUND; SMALLER (I.E.,
YOUNGER) TUMORS HAD A HIGH INCIDENCE OF REGRESSION AND DISAPPEARANCE.
WHEN THE TUMOR REACHED A CERTAIN CRIT. SIZE, DISTINCT MALIGNIZATION
OCCURRED, THE TUMORS GREW CONTINUOUSLY AND CAUSED DEATH OF THE ANIMAL.
HISTOL. EXAMNS. SHOWED THAT I INDUCED TUMORS ARE INITIALLY PRECANCEROUS,
AND ONLY BECOME MALIGNANT IN LATER STAGES.   FACILITY: INST. EXP.
CLIN. ONCOL., MOSCOW, USSR.

USSR

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UDC: 621.375.4.089.52-503.22:517.27

BESKROVNYY, I. M., ZABASHTA, P. T., NOVIKOV, A. F.

"Sensitivity Optimization of a Transistorized Amplifier with Negative Feedback"

V sb. Poluprovodn. pribory v tekhn. elektrosvyazi (Semiconductor Devices in Electrical Communications Technology--collection of works), Vyp. 5, Moscow, "Svyaz'", 1970, pp 159-165 (from RZh-Radiotekhnika, No 7, Jul 70, Abstract No 7D102)

Translation: Relationships are given which are used to optimize transistorized amplifiers with respect to minimum sensitivity of the transfer coefficient to a change in transistor gain h_{21e} in a common-emitter circuit. Resumé.

1/1

A70-23871 #   Solution of unsteady transport problems by the flux method (Reshenie nestatsionarnykh zadach po perenosu metodom potokov). I. M. Beskrovnyi (Akademiia Nauk Kazakhskoi SSR, Institut Iadernoi Fiziki, Alma-Ata, Kazakh SSR). *Inzhenerno-Fizicheskii Zhurnal*, vol. 18, Jan. 1970, p. 162-166. 6 refs. In Russian.

Description of a system of flux equations which is completely equivalent to the so-called P sub 1 approximation of the single-velocity Boltzmann equation. The proposed system features a faster solution of unsteady transport problems than that of the diffusion equation. The use of the system is illustrated for problems involving the propagation of a concentration discontinuity through a plane layer.
                                                                 T.M.

REEL/FRAME
19810720

USSR

VORONKIN, M. A. and BESOV, A. V.

"10th All-Union Conference on Powder Metallurgy"

Kiev, Poroshkovaya metallurgiya, No 5, May 71, pp 103-105

Abstract: An account is given of the work of the 10th All-Union Conference on Powder Metallurgy, which was held in Kiev on 19-22 January 1971 and organized by the Scientific Council on Powder Metallurgy, the powder metallurgy section of the Central Administration of the Scientific-Technical Society of the Machinery Industry, the Institute of Problems of Material Science, the Academy of Sciences Ukr SSR and by the Kiev House of Scientific-Technical Propaganda.   It was attended by 385 representatives from 98 Soviet cities and 150 organizations.   Eighteen survey reports on important problems and trends in powder metallurgy were presented.   Twenty-eight reports on problems of the development and introduction of methods for the production of powders, forming and sintering of new kinds of metal-ceramic materials and items were presented. Particular attention was given to problems of the development and application of metal-ceramic products.

USSR   UDC: 517.514

BESOV, O. V., IL'IN, V. P.

"Natural Expansion of a Class of Areas in Imbedding Theorems"

Teoremy Vlozheniya i Ikh Prilozheniya [Imbedding Theorems and Their
Applications -- Collection of Works], Moscow, Nauka Press, 1970, pp 21-23,
(Translated from Referativnyy Zhurnal Matematika, No. 8, 1970, Abstract
#8B75, by the authors).

Translation: It is shown that it is possible to expand a class of areas for which
the imbedding theorem is formulated as for the entire space.

1/1

UDC 546.185

USSR

KOSINSKAYA, I. M., PINCHUK, A. M., SHEVCHENKO, V. I., and BESPAL'KO, G. K.

"Phenyldichloro- and Diphenylchlorophosphazocyanoalkanes"

Abstract: Replacement of one chlorine atom by a phenyl radical in tri-
chlorophosphazocyanoalkanes does not prevent their conversion to tricyclic
compounds in a reaction with hydrogen chloride, but lowers drastically the
thermal stability of the products. The presence of two phenyl radicals in
the phosphazo group stops completely the conversion of the phosphazocyano-
alkanes into tricyclic compounds.

1/1

- 35 -

1/2   028   UNCLASSIFIED   PROCESSING DATE--27NOV70
TITLE--FRACTIONATION DURING THE SUBLIMATION OF MIXTURES OF AN ANTIMONY
    SESQUISULFIDE ANTIMONY SESQUIOXIDE SYSTEM -U-
AUTHOR-(03)-NADEZHINA, L.S., GRINZAYO, YE.L., BESPALENKOVA, YE.K.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(4), 874-6

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SUBLIMATION, ANTIMONY COMPOUND, METAL OXIDE, SULFIDE, SURFACE
    FILM, CHEMICAL DEPOSITION, METAL VAPOR DEPOSITION, COMPLEX COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/0427   STEP NO--UR/0080/70/043/004/0874/0876

CIRC ACCESSION NO--AP0126180
                            UNCLASSIFIED

CIRC ACCESSION NO--AP0126180   UNCLASSIFIED

ABSTRACT/EXTRACT--(U) GP-0-   ABSTRACT. THE COMPN. AND STRUCTURE OF THIN   PROCESSING DATE--27NOV70

VACUUM DEPOSITED SB SUB2 S SUB3 FILMS WERE STUDIED.   THE VOLATILIZATION

OF SB SUB2 S SUB3 FROM THE SOLID SB SUB2 S SUB3 SB SUB2 O SUB3 MIXT.

OCCURS AS PARTICLES OF COMPLEX COMPN. PARTIAL VAPORIZATION RATE VS.

COMPN. DIAGRAMS WERE USED TO EST. THE DEGREE OF SB SUB2 O SUB3

ENRICHMENT OF THE SUBLIMATE. THE SUBLIMATE IS ENRICHED IN O FOR ALL

COMPNS. OF THIS SYSTEM.   FACILITY: LENINGRAD. POLITEKH. INST.

IM. KALININA, LENINGRAD, USSR.

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--

1/2   010
TITLE--VAPOR PRESSURE OVER ANTIMONY SESQUISULFIDE ANTIMONY SESQUIOXIDE
MIXTURES -U-
AUTHOR-(03)-GRINZAYD, YE.L., NADEZHINA, L.S., BESPALENKOVA, E.K.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(2), 317-18

DATE PUBLISHED------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ANTIMONY COMPOUND, SULFIDE, OXIDE, VAPOR PRESSURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1954

STEP NO--UR/0078/70/015/002/0317/0318

----TION NO--AP0118916   UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0118916

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RATE OF EVAPN. IN A $SB_2O_3-SB_2S_3$ SYSTEM WAS DETD. GRAVIMETRICALLY AND A DIAGRAM OF TOTAL AND PARTIAL EVAPN. OF THE SYSTEM IS PRESENTED GRAPHICALLY. SB_2S_3 HAS AN ABNORMAL CURVE OF PARTIAL VAPOR PRESSURE FOR A WIDE RANGE OF CONCN. THE PARTIAL VAPOR PRESSURE OF SB_2O_3 SHOWS A POS. DEVIATION FROM RAOULT'S LAW. THE DATA IMPLY FORMATION OF AN UNIDENTIFIED OXYSULFIDE IN THE VAPOR PHASE.

FACILITY: LENINGRAD. POLITEKH. INST., LENINGRAD, USSR.

UNCLASSIFIED

$\mathcal{B}$

UDC 666.22:539.551

USSR

NEMILOV, S. V., KRYLOVA, L. A., ROMANOVA, N. V., ZHUKOVA, A. N., ALEKSEYEVA, R. A., NOVIKOVA, M. P., BESPAL'KO, Z. P., and TYNYANKINA, A. N.

"Viscosity of Optical Glasses"

Abstract: The viscosity η of 120 grades of glass ($\eta = 10^2 - 10^{13}$ poises) in relation to the temperature was determined. The results are listed in tables showing values of $\lg \eta$ for various temperatures t. The values included in the tables were obtained in part by interpolation and extrapolation of experimental values to cover the complete $\eta = 10^1 - 10^{16}$ poises range (t = 312-2010°). Determinations at $10^4 - 10^{13}$ poises were carried out by the method of pressing in described earlier, those at $10^1 - 10^4$ poises by means of GOI automatic rotational viscosimeters. Measurements of η carried out by the first method on glass No 710 of the USA National Bureau of Standards led to results which coincided with those reported by A. Napolitano and E. G. Hawkins, J. Res. Nat. Bur. Stand., A. Phys. a. Ch., 68A, 439, 1964. The rotational viscosimeters were calibrated at $10^2 - 10^4$ poises on the basis of values reported for glass No 710. Data obtained for B_2O_3 by means of these viscosimeters agreed with those reported in the literature. A glass with the composition SiO_2 69.60, B_2O_3 11.09, Al_2O_3 2.00, As_2O_3 0.10, BaO 0.65, CaO 1.37,

1/2

USSR

NEMILOV, S. V., et al., Zhurnal Prikladnoy Khimii, Vol 43, No 6, Jun 70, pp 1218-1225

MgO 0.80, K_2O 4.16, Na_2O 10.23 mole % was formulated, measurements on which in the $10^2 - 10^{13}$ poises ($t = 600-1300°$) range led to results that were readily reproducible.

UNCLASSIFIED   PROCESSING DATE--02OCT70

1/2   012

TITLE--REACTION OF DICHLOROCARBENE WITH 2,PHENYL,1,3,BUTADIENE -U-

AUTHOR-(02)-KOSTIKOV, R.R., BESPALOV, A.YA.

B

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(3) 629

DATE PUBLISHED------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHLORINATED ORGANIC COMPOUND, BENZENE DERIVATIVE, BUTADIENE, CYCLOPROPANE, OXIDATION, CARBOXYLIC ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1544

STEP NO--UR/0366/70/006/003/0629/0629

CIRC ACCESSION NO--AP0112538

UNCLASSIFIED

UNCLASSIFIED

CIRC ACCESSION NO--AP0112538   PROCESSING DATE--02OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTION OF H SUB2 C:CPHCH:CH SUB2 WITH CL SUB2 C: (PREPD. FROM NAOME AND CL SUB3 CCO SUB2 ET) GAVE 1,1,DICHLORO, 2,PHENYL,2,VINYLCYCLOPROPANE (I). OXIDN. OF I WITH KMNO SUB4 GAVE 1,1,DICHLORO,2,PHENYLCYCLOPROP,1,YLCARBOXYLIC ACID. CATALYTIC HYDROGENATION OF I GAVE 1,1DICHLORO,2,ETHYL,2,PHENYLCYCLOPROPANE, ALSO PREPD. BY REACTING H SUB2 C:CPHET WITH CL SUB2 C:.

UNCLASSIFIED

KOSINSKAYA, I. M., PINCHUK, A. M., SHEVCHENKO, V. I., and BESPAL'KO, G. K.

"Phenyldichloro- and Diphenylchlorophosphazocyanoalkanes"

Abstract: Replacement of one chlorine atom by a phenyl radical in tri
chlorophosphazocyanoalkanes does not prevent their conversion to tricyclic
compounds in a reaction with hydrogen chloride, but lowers drastically the
thermal stability of the products. The presence of two phenyl radicals in

CIRC ACCESSION NO--AP0126180
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE COMPN. AND STRUCTURE OF THIN
VACUUM DEPOSITED SB SUB2 S SUB3 FILMS WERE STUDIED.   THE VOLATILIZATION
OF SB SUB2 S SUB3 FROM THE SOLID SB SUB2 S SUB3 SB SUB2 O SUB3 MIXT.
OCCURS AS PARTICLES OF COMPLEX COMPN. PARTIAL VAPORIZATION RATE VS.
COMPN. DIAGRAMS WERE USED TO EST. THE DEGREE OF SB SUB2 O SUB3
ENRICHMENT OF THE SUBLIMATE. THE SUBLIMATE IS ENRICHED IN O FOR ALL
COMPNS. OF THIS SYSTEM.   FACILITY: LENINGRAD. POLITEKH. INST.
IM. KALININA, LENINGRAD, USSR.

UNCLASSIFIED

1/2   010   UNCLASSIFIED   PROCESSING DATE--30OCT70

TITLE--VAPOR PRESSURE OVER ANTIMONY SESQUISULFIDE ANTIMONY SESQUIOXIDE
   MIXTURES -U-

AUTHOR-(03)-GRINZAYD, YE.L., NADEZHINA, L.S., BESPALENKOVA, E.K.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(2), 317-18

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS---ANTIMONY COMPOUND, SULFIDE, OXIDE, VAPOR PRESSURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/1954   STEP NO--UR/0078/70/015/002/0317/0318

CIRC ACCESSION NO--AP0118916
                        UNCLASSIFIED

CIRC ACCESSION NO--AP0118916
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RATE OF EVAPN. IN A SB SUB2 O
  SUB3-SB SUB2 S SUB3 SYSTEM WAS DETD. GRAVIMETRICALLY AND A DIAGRAM OF
  TOTAL AND PARTIAL EVAPN. OF THE SYSTEM IS PRESENTED GRAPHICALLY. SB
  SUB2 S SUB3 HAS AN ABNORMAL CURVE OF PARTIAL VAPOR PRESSURE FOR A WIDE
  RANGE OF CONCN. THE PARTIAL VAPOR PRESSURE OF SB SUB2 O SUB3 SHOWS A
  POS. DEVIATION FROM RAOULT'S LAW. THE DATA IMPLY FORMATION OF AN
  UNIDENTIFIED OXYSULFIDE IN THE VAPOR PHASE.   FACILITY:
  LENINGRAD. POLITEKH. INST., LENINGRAD, USSR.

UNCLASSIFIED

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USSR

NEMILOV, S. V., KRYLOVA, L. A., ROMANOVA, N. V., ZHUKOVA, A. N., ALEKSEYEVA, R. A., NOVIKOVA, M. P., BESPAL'KO, Z. P., and TYNYANKINA, A. N.

"Viscosity of Optical Glasses"

Abstract: The viscosity η of 120 grades of glass ($\eta = 10^2 - 10^{13}$ poises) in relation to the temperature was determined. The results are listed in tables showing values of $\lg \eta$ for various temperatures t. The values included in the tables were obtained in part by interpolation and extrapolation of experimental values to cover the complete $\eta = 10^1 - 10^{16}$ poises range (t = 312-2010°). Determinations at $10^4 - 10^{13}$ poises were carried out by the method of pressing in described earlier, those at $10^1 - 10^4$ poises by means of GOI automatic rotational viscosimeters. Measurements of η carried out by the first method on glass No 710 of the USA National Bureau of Standards led to results which coincided with those reported by A. Napolitano and E. G. Hawkins, J. Res. Nat. Bur. Stand., A. Phys. a. Ch., 68A, 439, 1964. The rotational viscosimeters were calibrated at $10^2 - 10^4$ poises on the basis of values reported for glass No 710. Data obtained for B_2O_3 by means of these viscosimeters agreed with those reported in the literature. A glass with the composition SiO_2 69.60, B_2O_3 11.09, Al_2O_3 2.00, As_2O_3 0.10, BaO 0.65, CaO 1.37,
1/2

USSR

NEMILOV, S. V., et al., Zhurnal Prikladnoy Khimii, Vol 43, No 6, Jun 70, pp 1218-1225

MgO 0.80, K_2O 4.16, Na_2O 10.23 mole % was formulated, measurements on which in the 10^2 - 10^{13} poises (t = 600-1300°) range led to results that were readily reproducible.

2/2

TITLE--REACTION OF DICHLOROCARBENE WITH 2,PHENYL,1,3,BUTADIENE -U-

AUTHOR-(02)-KOSTIKOV, R.R., BESPALOV, A.YA.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(3) 629

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHLORINATED ORGANIC COMPOUND, BENZENE DERIVATIVE, BUTADIENE,
CYCLOPROPANE, OXIDATION, CARBOXYLIC ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1544   STEP NO--UR/0366/70/006/003/0629/0629

CIRC ACCESSION NO--AP0112538
                          UNCLASSIFIED

CIRC ACCESSION NO--AP0112535
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTION OF H SUB2 C:CPHCH:CH
   SUB2 WITH CL SUB2 C: (PREPD. FROM NAOME AND CL SUB3 CCO SUB2 ET) GAVE
   1,1,DICHLORO, 2,PHENYL,2,VINYLCYCLOPROPANE (I). OXION. OF I WITH KMNO
   SUB4 GAVE 1,1,DICHLORO,2,PHENYLCYCLOPROP,1,YLCARBOXYLIC ACID. CATALYTIC
   HYDROGENATION OF I GAVE 1,1DICHLORO,2,ETHYL,2,PHENYLCYCLOPROPANE, ALSO
   PREPD. BY REACTING H SUB2 C:CPHET WITH CL SUB2 C:.

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UNCLASSIFIED

BESPALOV,   D.   F.

NEUTRON PULSE METHODS IN GEOPHYSICS

Study of the elementary composition and properties of rocks under the conditions in which they are situated naturally is an important stage in searches for and surveys of mineral deposits and also in control of their working. Among the geophysical methods used for that, a special place belongs to neutronic methods. Neutron sounding gives multifaceted information about the composition and properties of rocks. In addition, neutrons and the gamma-quanta caused by them have a relatively great penetrating capacity, thanks to which the investigated part of a matter is rather large and substantially exceeds the dimensions of a drillhole.

Neutronic methods of investigating drillholes were born in 1940, when B. M. Pontecorvo proposed a neutronic method of distinguishing collectors (porous strata containing petroleum or water). Initially, N.-Be or Ra-Be sources of neutrons were used, each give a flux of those particles continuous in time. The distinguishing of collectors in a profile of the drillhole is based on the ability to moderating power of hydrogen, which causes a drop in the indications of the detector registering thermal neutrons. With those methods, it is also possible to distinguish strata saturated with petroleum and strongly mineralized stratal waters. Such a difference in the absorption of thermal neutrons by collectors containing elements with a large neutron-absorption cross-section, mainly chlorine, are dissolved in the mineralized stratal water. The moderation instrument notes change either in the density of the thermal neutrons or in the intensity of the gamma-radiation of radiative neutron capture.

- 50 -

USSR   UDC: 536.46:533.6

BESPALOV, I. V.

"Structure of the Combustion Zone in a Turbulent Boundary Layer on a
Permeable Wall"

V sb. Vopr. teorii goreniya (Problems of Combustion Theory--collection of
works), Moscow, "Nauka", 1970, pp 29-40 (from RZh-Mekhanika, No 4, Apr 71,
Abstract No 4B788)

Translation: The paper presents the results of an experimental study of
the combustion of propane forced through the permeable wall of a tube or
flat plate into a stream of air. Stable burning was maintained by pilot
lights. Measurements were made of the state of the gas, the time-averaged
flow temperature, the instantaneous value of the flow temperature deter-
mined by a quick-response resistance thermometer, and short-exposure
shadow photographs of the flame were also made. It was found that there
are considerable concentrations of the products of incomplete combustion
and oxygen close to the wall, which implies that an appreciable part is
played by chemical kinetics under the given conditions. The measured

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BESPALOV, I. V., <u>Vopr. teorii goreniya</u>, Moscow, "Nauka", 1970, pp 29-40

maximum time-averaged temperature was appreciably lower than the equilib-
rium combustion temperature with the stoichiometric composition, which is
attributed to chaotic oscillations of the flame front. These oscillations
are observed in photography of the flame and in measurement of the instan-
taneous gas temperature. Conclusions relating to flame development length-
wise of the channel are not very well illustrated by experimental data.
V. A. Frost.

2/2

USSR   UDC 621.385.032.21 (088.8)

BESPALOV, K. I., PAL'CHEVSKIY, B. A.

"Study of the Quality of Adhesion of Oxide Coating to a Cathode Base"

Elektron. tekhnika. Nauch.-tekhn. sb. Tekhnol. i organiz. proiz-va (Electronics Technology. Scientific-Technical Collection. Technology and Organization of Production), 1971, No 5(45), pp 121-126 (from RZh:Elektronika i yeye primeneniye, No 2, Feb 72, Abstract No 2A106)

Translation: The quality of adhesion of a coating to a cathode base /kern/ was studied with the use of various adhesive compositions and a choice of the optimum composition of the adhesive and optimum conditions of sticking. The results are presented of a study of the dependence of the magnitude of the bonding strength c the content in the adhesive composition of dioctyl phthalate (DOP) or polymethyl methacrylate (PM), and also the effect of the stocking conditions on the quality of production of printed cathodes. The magnitude of the initial bonding strength is increased in direct proportion to the increase of the quantity of

1/2

USSR

BESPALOV, K. I., et al, Elektron.tekhnika. Nauch-tekhn.sb.
Tekhnol. i organiz. proiz-va, 1971, No 5(45), pp 121-126

PM in the adhesive composition. The magnitude of the critical
bonding strength is increased with an increase of the content
of DOP or PM up to a fixed limit, after which a further increase
of the DOP or PM content in the adhesive composition leads to an
abrupt decrease of the magnitude of the critical bonding strength
and the reliability of the adhesion. Optimum adhesive composi-
tions in acetone are 1/5 DOP and 1/10 PM. A decrease of the
bonding, beginning with the fixed composition of PM in the ad-
hesive composition, can be explained by the increase of the thick-
ness of the anticontact film of PM between the coating and the
cathode base. Similarly, a change of the magnitude of the bonding
strength is observed for an adhesive composition with DOP. Use
of close pressing /podpressovka7 with compressed air decreases
the thickness of the anticontact film. For the adhesive com-
positions selected the optimum pressure is 3 atm. 4 references.
AF

2/2

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Acc. Nr: AP003⊙0 1⁻   Ref. Code: UR 0056

STIMULATED MANDELSTAM — BRILLOUIN AND STIMULATED ENTROPY BACKSCATTERINGS OF LIGHT PULSES

V. I. Bespalop, G. A. Pasmanik

A theory of stimulated Mandelstam — Brillouin and entropy backscatterings of light is developed in the prescribed pumping field approximation by taking into account fluctuation processes in the medium. The intensity and spectral distribution of light scattered by laser pulses whose duration is either greater or smaller than the time of traversal of the scattering volume by light are determined. Accumulative effects arising on scattering of a set of ultrashort pulses are discussed. In particular narrowing of the scattered light spectrum with growth of number of the exciting pulse is considered.

REEL/FRAME
19731095

21

1/2   038   UNCLASSIFIED   PROCESSING DATE--23OCT70
TITLE--STIMULATED SCATTERING OF ULTRASHORT LIGHT PULSES -U-

AUTHOR-(02)-BESPALOV, V.I., PASMANIK, G.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., RADIOFIZ. 1970, 13(1), 148-50

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--LIGHT SCATTERING, SIMULATION, UV LASER, LASER PULSE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1987/0166   STEP NO--UR/0141/70/013/001/0148/0150

CIRC ACCESSION NO--AT0103845
                    UNCLASSIFIED

CIRC ACCESSION NO--AT0103845
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A THEORETICAL DISCUSSION IS GIVEN
  OF THE EFFECTS AND PECULIARITIES OF STIMULATED SCATTERING (TEMP.
  SCATTERING DETD. BY ONE PHOTON LIGHT ABSORPTION AND MANDELSTAM BRILLOUIN
  SCATTERING) OF ULTRASHORT LASER PULSES.   FACILITY:
  NAUCH.-ISSLED. RADIOFIZ. INST., GOR'K. UNIV., GORKI, USSR.

UNCLASSIFIED

USSR

UDC: 621.317.726

BESPALOV, V. K., BORISENKO, N. A., GUBAR', V. I.

"Wide-Band Converters of Effective Values"

Translation: The authors discuss problems of using thermoconverters for constructing effective-value voltmeters, increasing their speed, converter errors, etc. In addition, consideration is given to the use of other converters for the same purposes, e. g. with metallic heated resistors or with an electrostatic voltmeter. It is pointed out that a voltmeter is presently being developed on the basis of differentially connected thermoconverters. Brief technical characteristics are given. Bibliography of five titles. E. L.

1/1

1/2   018   UNCLASSIFIED   PROCESSING DATE--30OCT70
TITLE--DEGREE OF LIGHT ABSORPTION IN POTASSIUM DIHYDROGEN PHOSPHATE SINGLE
   CRYSTALS -U-
AUTHOR-(03)-AVERBAKH, V.S., BATYREVA, I.A., BESPALOV, V.O.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., RADIOFIZ. 1970, 13(2), 307-9

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--PHOSPHATE, SINGLE CRYSTAL, HYDROGEN COMPOUND, ABSORPTION
   COEFFICIENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1559   STEP NO--UR/0141/70/013/002/0307/0309

CIRC ACCESSION NO--AP0125185
                              UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125185

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SPECTRAL CURVES WERE DETD. OF THE ABSORPTICN COEFFS. OF K DIHYDROGEN PHOSPHATE SINGLE CRYSTALS IN THE WAVELENGTH RANGE 0.6-1.4 MU FOR THE ORDINARY AND THE EXTRAORDINARY RAYS. THE RELATIVE DISPERSION OF THE ABSORPTION COEFF. FOR THE ORDINARY WAVE WAS LOW.   FACILITY: NAUCH.-ISSLED. RADIOFIZ. INST., GOR'K. UNIV., GORKI, USSR.

UNCLASSIFIED

Receivers and Transmitters

USSR   UDC 621.391.8

BESPALOV, YE. S., KULESHOV, V. N.

"Optimal Phase AFC System for Filtering FM Signals in Internal
Noise"

Abstract: This paper shows how the optimal filter for a phase
AFC circuit detecting FM signals in noise with limited disper-
sion can be obtained by using the theory of optimal linear fil-
tration, with the instability of the local oscillator taken
into account. Considering a linear model of the phase AFC
system, the authors assume it acted upon by three additive ran-
dom processes: the phase deviation of a standard signal; the
external of "phase" noise; the internal noise or the disturbance
caused by the instability of the local oscillator frequency.
They assume also that the external noise has an energy spectral
density which is constant in the FM signal band, and that the
phase modulation is realized by a telegraph signal. The local
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oscillator disturbance is assumed to be the result of shot noise. A curve is plotted for the relative mean-square error of the optimal phase AFC system which indicates that the fluctuating internal disturbance's contribution to the total error in the signal filtration is large only when the spectral intensity of the disturbance is equal to or exceeds the external noise intensity at a particular frequency.

2/2

USSR

UDC 621.397.332

BESPALOV, YE.S., KAPELINSKIY, I.YU., SOLOV'YEV, A.N.

"Optimization of Television Automatic Controls"

Dokl. Nauchno-tekhn. konferentsii po itogam nauchno-issled. rabot za 1968-1969 gg. Mosk. energ. in-t, 1970. Sekts. radiotekhn. Podsekts. televid. (Reports of the Scientific-Engineering Conference on Advances in Scientific-Research Studies in 1968-1969. Moscow Energetics Institute, 1970. Section on Radio Engineering. Subsection on Television), Moscow, 1969, pp 85-96 (from RZh-Radiotekhnika, No 2, Feb 70, Abstract No 2D108)

Translation: A system for automatic horizontal correction of a TV raster subject to simultaneous action of signal and noise is considered. The optimization criterion is a minimum of the random error for given memory time and given dynamic accuracy. The class of linear stationary systems is taken as the class of acceptable systems. Two processing techniques are examined: phase detection and frequency detection. Seven illustrations. Five references. Ye.T.
1/1

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USSR

UDC 617-001.28-092.9-07:616.127-091-3-076.4

MITYUSHIN, V. M., BESPALOVA, L. A., (Institutes of Biophysics, Ministry of Health USSR, Moscow)

"Change in the Ultrastructure of Dog Myocardium at Different Periods After Total Gamma-Ray Irradiation."

Abstract: The ultrastructure of myocardial cells of the left ventricle was studied in dogs at different stages of acute radiation sickness caused by whole-body gamma-ray irradiation in a dose of 350 r. Electron microscope investigation revealed a varying degree of sensitivity and susceptibility to injury of the myocardial intra-cellular structures: the most labile components were the mitochondria. Destructive changes in mitochondria were already noted during the first hours after gamma-ray irradiation. The most resistant components were myofibrils and muscle nuclei, which were damaged only in the late periods of the experiment.

1/1

USSR

BESPALOVA, N. S. and GURVICH, L. G.

"Modeling Atomic Liberation from Crystal Surface Layers on the Electronic Computer"

Abstract: This paper is concerned with the liberation of primary atoms from the surface of a solid undergoing radiational sputtering in a field of nuclear activity, a process which leads to the erosion of the surface. Computation of the liberation process and of the shift in the atoms caused by such liberation can be done on the electronic computer. For the purpose of estimating the possibilities of using the computer for solving the problem of radiation erosion, this paper considers a model of a space-centered cubic lattice with a volume of $5 \times 5 \times 4 \ a^3$ containing 148 atoms. Modeling the liberation of an atom from the surface layers consists in solving the system of equations

$$m \ dv_{\alpha i}/dt = F_{\alpha i}(x_1, \ y_1, \ z_1, \ldots, \ x_N, \ y_N, \ z_N),$$
$$dx_i/dt = v_{\alpha i}; \quad \alpha = x, \ y, \ z; \quad N = 1, \ 148.$$

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USSR⁻

UDC: 539.121.7+621.38

BESPALOVA, N. S., et al, Doklady Akademii nauk SSSR, vol. 202,
No 4, 1972, pp 804-806

This system was solved on the BESM-2M computer by the method of
finite differences. The stability of the model is estimated. The
work was done at the Institute of Atomic Physics, Uzbek Academy
of Sciences.

2/2

ON SYNCHRONIZATION OF CLOCKS IN THE GENERAL RELATIVITY THEORY

L. Ya. Arifov, N. S. Bespalova

The possibility of a global description of space-time relations in the four-dimensional continuum of the theory of relativity is investigated. For this purpose a time function and space equation as hypersurfaces of simultaneous points are introduced.

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REEL/FRAME
19770078

2/ DIT

Acoustical and Ultrasonic

BESPALOVA, Ye. I., VOROTNIKOVA, M. I., KONONENKO, V. O.

"Diffraction of a Shock Wave in Water Against an Absolutely Rigid Nonmoving Cylinder"

Abstract: The hydrodynamic pressure field around an infinitely long, absolutely rigid nonmoving cylinder in an acoustic medium is studied when the cylinder is struck by a shock wave with exponential pressure drop behind the leading edge. The solution, first found in the field of a Laplace transform, is sought in the space of the true variable by the method of numerical inversion using Legendre polynomials. The method is applicable for any time interval. Experimental recording of pressure at several points around metal cylinders qualitatively confirms the course of the process of loading of the cylinder with time.

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USSR   UDC 539.3

GRIGORENKO, YA. M., BESPALOVA, YE. I., LATSINNIK, I. F., (Kiev), Institute of
Mechanics, Academy of Sciences, Ukrainian SSR

"Calculation of Plates of Variable Rigidity"

Abstract: The article approaches a solution to two-dimensional boundary-value
problems of the curvature of rectangular plates with rigid characteristics,
variable in two directions, with various combinations of hinged and rigid
support of two opposing edges. The problem is solved by the method of integral
relationship in the form of L. V. Kantorovich with the use of trigonometric
functions. Solution of unidimensional problem is realized by means of a stable
numerical method on an electronic digital computer. Examples are given of the
calculation of specific problems which illustrate good convergence of the
applied method. This approach may be used without any essential difficulties
also when solving problems given with a stress-deformed state of open shells
of variable rigidity in two directions. One figure, two tables, six references.

1/1

TITLE--SYNTHESIS BASED ON 2,METHYL,4,QUINOLINECARBOXYLIC ACID -U-

AUTHOR--LIPKIN, A.YE., BESPALOVA, ZH.P.

COUNTRY OF INFO--USSR

SOURCE--KHIM. FARM. ZH. 1970, 4(1), 24-6

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CHEMICAL SYNTHESIS, QUINOLINE, AROMATIC CARBOXYLIC ACID,
 CANCER DRUG, ESCHERICHIA COLI, SHIGELLA, AROMATIC NITRO COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1984/1708   STEP NO--UR/0450/70/004/001/0024/0026

CIRC ACCESSION NO--AP0100305
                        UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--11SEP70
CIRC ACCESSION NO--AP0100305
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A SERIES OF POTENTIAL
  ANTICARCINOGENS WAS PREPD. BY TREATING 0.01 MOLE 2,METHYL
  4,QUINOLINECARBOXYLIC ACID (M. 243-5DEGREES) WITH 0.01 MOLE ALDEHYDE IN
  10 ML AC SUB2 O, AND HEATING THE MIXT. 30 MIN AT 180-90DEGREES. THUS
  WERE PREPD. I (R AND M.P. GIVEN): PH (IA), 289-90DEGREES; O-NITROPHENYL
  (II), 293-4DEGREES; M-NITROPHENYL (III), 316-17DEGREES; P-NITROPHENYL
  (IV), 324-5DEGREES; 2-FURYL, 196-8DEGREES, 5,NITRO,2,FURYL,
  297-8DEGREES; 2-THIENYL, 292-3DEGREES; 5,NITRO,2,THIENYL, 296DEGREES.
  WHEN TESTED AGAINST INTESTINAL MICROBES, II AND III WERE INACTIVE AND IV
  ONLY SLIGHTLY ACTIVE. IA WAS ACTIVE AGAINST CANDIDA ALBICANS,
  E(SCHERICHIA) COLI AND SH(IGELLA) SONNEI.

UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--11SEP70
TITLE--ON THE AGE OF ERMANOV ROCK SERIES OF EASTERN SHORE OF PENZHINA GULF
  -U-
AUTHOR--BESPALYY, V.G., FAYNBERG, F.S., REMIZOVSKIY, R.I.

COUNTRY OF INFO--USSR

SOURCE--GEOLOGIYA I GEOFIZIKA, 1970, NR 1 (121) P 123-129

DATE PUBLISHED-------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--ABSOLUTE AGE, EARTH CRUST AGE, PALEOMAGNETISM, GEOCHRONOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY RFEL/FRAME--1986/1284   STEP NO--UR/0210/70/000/001/0123/0129

CIRC ACCESSION NO--AP0103166
                    UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0103166

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RESULTS OF STUDY OF SECTION OF
   CONTINENTAL SEDIMENTS OF ERMANOV ROCK SERIES AND UNDERLYING SEA
   FORMATIONS OF ETALONSK ROCK SERIES ON THE SHORE OF REKINNIK GULF
   (KAMCHATKA) ARE DESCRIBED IN THE PAPER. THE AUTHORS ESTABLISH THE UPPER
   LIMIT OF SECTION AGE, ABOUT 3 MLN YEARS (MIDDLE PLIOCENE OR LOW PARTS OF
   UPPER PLIOCENE) BASED UPON THE COMPARISON OF MAGNETIC POLARITY OF
   ERMANOV SUITE ROCKS WITH PALEOMAGNETIC GEOCHRONOLOGICAL SCALE OF
   PLIOCENE PLEISTOCENE.

                                        UNCLASSIFIED

1/2   013   UNCLASSIFIED   PROCESSING DATE--16OCT70
TITLE--SERVICE OF CHROMIUM SPINEL FORSTERITE CERAMICS IN UPTAKES OF ROOFS
  OF SLAG POCKETS AND REGENERATORS OF OPEN HEARTH FURNACES -U-
AUTHOR-(04)-UZBERG, A.I., BRON, V.A., VYDRINA, ZH.A., BESPAMYATNYKH, V.I.

COUNTRY OF INFO--USSR

SOURCE--OGNEUPORY 1970, 35(2), 23-31

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--SPINEL, OPEN HEARTH FURNACE, CHROMIUM COMPOUND, CERAMIC
  MATERIAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/0890   STEP NO--UR/0131/70/035/002/0023/0031

CIRC ACCESSION NO--AP0118059
                          UNCLASSIFIED

CIRC ACCESSION NO--AP0118059
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CR SPINEL FORSTERITE (I) CERAMICS
WERE FOUND ON EVALUATION TO BE SUITABLE AS REPLACEMENT FOR MAGNESITE
CHROMITE (II) LININGS. THE USE OF I WAS EXPECTED TO ECONOMIZE THE
PROCESS. THE POSSIBLE CRYSTALLOGRAPHIC AND CHEM. CHANGES OCCURRING
DURING SERVICE (REVERSIBLE REDN. OF FE SUB2 O SUB3, RECRYSTN. OF
FORSTERITE, CHROMITE, AND SILICATE PHASE) IS DISCUSSED.
FACILITY: VOST. INST. OGNEUPOR, SVERDLOVSK, USSR.

UNCLASSIFIED

Construction

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USSR   UDC 539.4:624.012

ZHUNUSOV, T. Zh., BESPAYEV, A. A.

"Influence of Prestressing of Reinforced Concrete Columns on Earthquake
Resistance of Multistory Rod Frames"

Seysmostoikost' Predvaritel'no Napryazhen. Zhelezobeton. Konstruktsiy
[Earthquake Resistance of Prestressed Reinforced Concrete Structures --
Collection of Works], Moscow, 1972, pp 268-275, (Translated from Refera-
tivnyy Zhurnal, Mekhanika, No 11, 1972, Abstract No 11 V954, from the
Resume).

Translation: The results of studies of the prestressed state of two-span
three-level frames measuring 3.5 × 4 m with reinforced concrete columns
and metal beams are presented. The influence of varying degrees of pre-
stressing of columns on strength, rigidity and distribution of forces in
the system under short-term static and dynamic loading with a horizontal
load was studied. The expediency of static design of reinforced concrete
frames considering the variable rigidity of the elements is estimated.
Information is presented on the attenuation of free oscillations of frames
with various levels of external action.

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Petroleum Processing Technology

USSR   UDC 662.749.75:543.872

BUSHUYEVA, Ye. M., and BESPOLOV, I. Ye., All Union Scientific Research
Institute of Petroleum Products

"Effect of the Hydrocarbon Composition of Jet Fuels on Their Thermal
Stability"

Abstract: A source of sediment formation during oxidation of jet fuels, beside
that of nonhydrocarbon compounds, consists of aromatic hydrocarbons, especially
of the derivatives of naphtalene and polycyclic naphthenes; in comparison,
alkyl derivatives of benzene form sediments to a much lesser degree. Paraffins
and naphtenes found in jet fuels form no sediments. The structure of the non-
aromatic components has a definite effect on the degree of coagulation of the
oxidation products of aromatic hydrocarbons and hence on the quantity of sedi-
ment formed. Maximum quantity of a solid phase forms during oxidation of mix-
tures of aromatic and branched aliphatic hydrocarbons; minimal levels are
formed during oxidation of their mixtures with bicyclic hydrocarbons (such as
decaline). The quantity of so.id phase formed is increased as the length of
the side chain in the cyclic hydrocarbons in the mixture is increased. Thus,

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BUSHUYEVA, Ye. M. and BESPOLOV, I. Ye., Khimiya i Tekhnologiya Topliv i Masel,
No 9, 1971, pp 46-49

hydrocarbon fuels show high thermal stability when they contain no polycyclic
naphthenes or aromatic hydrocarbons. In cases when the fuel mixture contains
at least 30-40% of bicyclic hydrocarbons, limited amounts of monocyclic
aromatic hydrocarbons may be tolerated -- up to 10-15%.

BESPROZVANIYA, A. A.

"Experimental Investigation of the Hydrodynamic Characteristics of a Wing in a Two-Phase Flow"

Translation: The paper presents the results of tests of a series of wings in a cavitation tube under conditions of a two-phase flow which was formed by saturation of a fluid at Reynolds numbers of $(0.8-1.5) \cdot 10^6$ and angles of attack of $\pm 16°$. The test data are used to determine the hydrodynamic characteristics of the wings at low numbers M_∞ when the influence of compressibility is insignificant, and at high numbers M_∞. Conditions are established which correspond to an abrupt transition and to detached flow with a well developed cavity; an investigation is made into the effect of a two-phase flow on the hydrodynamic characteristics of a hydrofoil located close to the interface between a two-phase and a single-phase flow. It is shown that an abrupt change in the hydrodynamic characteristics of wings

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USSR

BESPROZVANIYA, A. A., <u>Tr. Leningr. korablestroit. in-ta,</u> 1971, vyp. 74, pp 25-30

is theoretically possible both in the case where the wings are located directly in a two-phase flow, and when they are some distance away from such a flow.   B. I. Bakum.

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101747r Modification of poly(vinyl chloride) fibers by alkyl-chlorosilanes. Vol'f, L. A.; Besprozvannykh, A.; Podlesskaya, N. K.; Klimenko, I. B.; Shelkunov, N. G.; Grachev, V. T. (USSR). *Khim. Volokna* 1970, (1), 76-7 (Russ). Poly(vinyl chloride) (I) fibers were given water repellency by dehydrochlorination in the presence of $FeCl_3$ or diazoaminobenzene (II) catalyst followed by treating with Me_3SiCl (III), Me_2SiCl_2 (IV), or $MeSiCl_3$ (V) to give modified I having increasing Si content with increasing double bond content and amt. of Cl in the silanes. I fibers were dehydrochlorinated in the free state with 6% II and alc. by heating 18-20 hr at 90-100° or in the fixed state at 130° for 10-18 hr with II or 0.5-1 hr with 20% $FeCl_3$ soln. After removing from the catalyst bath (with bath ratio 40) and drying to 3-7% catalyst add-on, the fibers were impregnated with the silanes. e.g. with a bath contg. 2-10% V (bath ratio 30) for 10-15 min at 20°; heated in air 2-5 hr at 90-130°; extd. for 1 day with benzene. and washed 5 times with H_2O or 1.5 times with steam to give I with 0.2-2% Si. Si content increased with increasing silane concn. in the bath, temp., and length of treatment. Although V gave the highest Si content, V gave the best water repellency as detd. by contact angle measurements. Si addn. to I was by Si-O-C bonds as well as by Si-C bonds.   BCJR

REEL/FRAME
19801714

1/3   024   UNCLASSIFIED   PROCESSING DATE--02OCT70
TITLE--CYCLIC VARIATIONS OF THE A SUB0 AND N PARAMETERS IN THE LATITUDE
  DEPENDENCE OF MIDDAY F2 LAYER IONIZATION, MIDDAY IONIZATION OF THE F2
AUTHOR-(02)-CESPROZVANNAYA, A.S., YUDOVICH, L.A.

COUNTRY OF INFO--USSR

SOURCE--ARCTIC AND ANTARTIC SCIENTIFIC RESEARCH INSTITUTE AND INSTITUTE OF
  TERRESTRIAL MAGNETISM, IONOSPHERE AND RADIO WAVE PROPAGATION; MOSCOW,
DATE PUBLISHED-------70

SUBJECT AREAS--ATMOSPHERIC SCIENCES, ASTRONOMY,ASTROPHYSICS

TOPIC TAGS--F LAYER,   IONIZATION, VERTICAL SOUNDING, SOLAR ACTIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY RFEL/FRAME--1990/1664   STEP NO--UR/0203/70/010/002/0336/0338

CIRC ACCESSION NO--AP0109657
                        UNCLASSIFIED

CIRC ACCESSION NO--AP0109657

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ANALYTICAL FORMULA FOR
DESCRIBING THE GEOGRAPHIC DISTRIBUTION OF MIDDAY IONIZATION OF THE F2
LAYER IS (SHOWN ON MICROFICHE) WHERE M SUBIK IS EQUAL TO THE RATIO OF
THE FOURTH POWER OF THE COSINES OF SOLARZENITH ANGLE AT THE ENDS OF THE
MAGNETIC LINE OF FORCE PASSING THROUGH A PARTICULAR POINT WITH
COORDINATES I (IN LATITUDE) AND K (IN LONGITUDE). THE PARAMETERS A SUB
0 AND N ARE FOUND EMPIRICALLY. DATA FROM THE WORLD NETWORK OF VERTICAL
SOUNDING STATIONS IN THE NORTHERN HEMISPHERE WERE USED IN COMPUTING THE
A SUB0 AND N PARAMETERS FOR 1958-1964. THE ANALYSIS REVEALED THAT THERE
ARE SUBSTANTIAL CYCLIC CHANGES IN THE A0 AND N PARAMETERS WITH A
LATITUDE DEPENDENCE OF MIDDAY IONIZATION OF THE F 2 LAYER. THE RADIO
EMISSION FLUX AT LAMBDA EQUALS 10.7 CM CORRELATES BETTER WITH
PHOTOIONIZING RADIATION THAN WITH SPOT NUMBER. LINEARITY OF THE
DEPENDENCE IS NOT IMPAIRED EVEN DURING THE PERIOD OF HIGH SOLAR
ACTIVITY. COMPARISON OF DATA FOR 1958 AND 1964 REVEALED THAT IN
RELATIVE UNITS THE AMPLITUDE OF THE ANNUAL VARIATION REMAINS CONSTANT
WITH TRANSITION FROM YEARS OF MAXIMUM TO MINIMUM ACTIVITY, ALTHOUGH IN
ABSOLUTE VALUE IT DECREASED BY HALF DURING THIS PERIOD. THE EXPONENT N
IN THE FOMULA IS FOR THE COSINE OF SOLAR ZENITH ANGLE. THE NATURE OF
ITS CHANGES DURING THE CYCLE IS DIFFERENT FOR DIFFERENT SEASONS. DURING
MARCH AND DECEMBER N INCREASES WITH A DECREASE IN SOLAR ACTIVITY WHEREAS
IN JUNE AND SEPTEMBER IT DECREASES. IN YEARS OF MAXIMUM SOLAR ACTIVITY
THERE ARE LOW N VALUES DURING WINTER AND A MARKED INCREASE IN N WITH AN
INCREASE IN SOLAR DECLINATION FOR BOTH HEMISPHERES. IN WINTER THE N
VALUES IN YEARS.

UNCLASSIFIED

373.   024   UNCLASSIFIED   PROCESSING DATE--02OCT70
CIRC ACCESSION NO--AP0109657
ABSTRACT/EXTRACT--OF THE MINIMUM ARE GREATER THAN DURING YEARS OF THE
 MAXIMUM.   THE REVERSE IS TRUE FOR SUMMER.

89

UNCLASSIFIED

Acc. Nr.: _AP0042365_

Ref. Code: _ЦR0203_

JPRS 50162

Equatorial Anomaly of Midday Ionization of F2 Layer

(Abstract: "Characteristics of the Equatorial Anomaly of Midday Ioniza-
tion of the F2 Layer During the Winter and Summer Solstices," by A. S.
Besprozvannaya, Arctic and Antarctic Scientific Research Institute; Moscow,
Geomagnetizm i Aeronomiya, Vol X, No 1, 1970, pp 56-58)
    Most studies of the equatorial anomaly of the F2 layer have been
made for the equinoctial period. In this study the equatorial anomaly
was investigated on the basis of data for 11 stations in the Asiatic zone
and 10 stations in the American zone. The midday critical frequencies were
determined for four winter and summer months of 1958 and the difference
between the observed and computed f_0F2 values was determined as an average
for the corresponding season. It was found that there is a distinct dif-
ference in the equatorial anomaly for the Asiatic and American zones. In
the Asiatic zone the position of the minimum (or "equator" of the F2 layer)
remains virtually unchanged from season to season. In summer and winter
the F2-layer equator almost coincides with the magnetic equator, being
situated 1-2° to the north of it. In the American zone the position of
the minimum changes considerably with season. During the summer months
the F2-layer equator, as in the Asiatic zone, almost coincides with the

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Reel/Frame
19760313

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AP0042365

magnetic equator. However, during the winter months the F2-layer equator is displaced 8-10° to the north. The asymmetry of the equatorial anomaly and displacement of the center of the minimum in the American zone can be an indication that in this region there is an intensification of horizontal pressure gradients. The fact that there is a seasonal difference in the nature of the asymmetry indicates a change in the direction of the horizontal wind. In both the American and Asiatic zones the depth of the anomaly is less in summer than in winter. This results in a seasonal change in the sign of the longitude effect of the F2-layer equator.

19760314

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1/2   007   UNCLASSIFIED   PROCESSING DATE--02OCT70

TITLE--REACTION OF ARYLDIAZONIUM SALTS WITH UNSUBSTITUTED AMIDES AND
  THIOAMIDES OF CARBOXYLIC ACIDS -U-

AUTHOR-(03)-NESYNOV, YE.P., BESPROZVANNAYA, M.M., PELKIS, P.S.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(3) 540-4

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--DIAZONIUM SALT, CARBOXYLIC ACID, AMIDE, ORGANIC SULFUR
  COMPOUND, MOLECULAR STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1991/2572   STEP NO--UR/0366/70/006/003/0540/0544

CIRC ACCESSION NO--AP0112566

                       UNCLASSIFIED

CIRC ACCESSION NO--AP0112566

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTION OF SC SUB6 H SUB4 N
SUB2 CL (X EQUALS H, O-CL, P-CL, M-ME, M-N? SUB2, P-ETH, P-CL) SUBS II,
OR P-BR) WITH PHNHC(:S)NH SUB2 (I) IN NAOH SOLN. GAVE 9 50PERCENT
PHN:C(NH SUB2)SC SUB6 H SUB4 X (II) AND ALSO THE CORRESPONDING PHN:C(SC
SUB6 H SUB4 X)NHHN:NC SUB6 H SUB4 X (III). THE REACTION OF II WITH XC
SUB6 H SUB4 N SUB2 CL ALSO GAVE III. THE REACTION MUST INVOLVE
PHNHC(SNA):NH AS THE INTERMEDIATE SINCE IN ACIDIC SOLN. I ARE NOT
FORMED. SIMILARLY, IN AQ. NAOH SOLN. RCONH SUB2 EXIST AS RC(ONA):NH
WHICH REACT WITH XC SUB6 H SUB4 N SUB2 CL GIVING RC(OC SUB6 H SUB4
X):NN:NC SUB6 H SUB4 X (R AND X GIVEN): ME, P-CL; PH, H; PH, O-CL.
ALSO PHNHNHC(:S)NHCH SUB2 CH:CH SUB2 PLUS NAOH IN EQUILIBRIUM
PHNHN:C(SNA)NHCH SUB2 CH:CH SUB2 (IV). THE REACTION OF IV WITH PHN SUB2
OAC GAVE A MIXT. OF PHNHN:C(SPH)-NHCH SUB2 CH:CH SUB2 AND
PHN(N:NPH)N:C(SPH)NHCH SUB2 CH:CH SUB2, (V) (THE STRUCTURE
PHNHN:C(SPH)N(N:NPH)CH SUB2 CH:CH SUB2 IS NOT EXCLUDED FOR V).

1/2   OC9   UNCLASSIFIED   PROCESSING DATE--30OCT70

TITLE--REACTICN CF ARYLDIAZONIUM SALTS WITH ACETOTHIOACETIC ACID
   ARYLAMIDES -U-

AUTHOR-(03)-NESYNOV, YE.P., BESPROZVANNAYA, M.M., PELKIS, P.S.

CCUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(4), 805-9

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--AMIDE, ORGANIC SALT, ACETIC ACID, THIOL, CONDENSATION
   REACTION, ORGANIC AZOLE COMPOUND, HYDROLYSIS

CCNTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/2156   STEP NO--UR/0366/70/C06/004/0305/0809

CIRC ACCESSICN NO--AP0125739
                             UNCLASSIFIED

CIRC ACCESSION NO--AP0125739
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONDENSATION OF MECOCH SUB2
C(S)NHPH WITH XC SUB6 H SUB4 N SUB2 CL IN AQ. ACETONE SOLN. CONTG. ACONA
GAVE MECOC(:NNHC SUB6 H SUB4 X)C(S)NHPH (I). THE REACTION OF I WITH X
PRIME1 C SUB6 H SUB4 N SUB2 CL IN ALK. SOLN. GAVE MECOC(:NNHC SUB6 H
SUB4 X)C(:NPH)SC SUB6 H SUB4 X PRIME1 (II). THE HYDROLYSIS OF I GAVE X
PRIME1 C SUB6 H SUB4 SH.   THE REACTIONS OF II WITH H SUB2 NNH SUB2.H
SUB2 O GIVE MECOC(CONHPH):NNHC SUB6 H SUB4 X,
3,METHYL,4,ARYLHYDRAZONO,5,ANILINOPYRAZOLE, AND MEC(:NNH SUB2) C(:NNHC
SUB6 H SUB4 X)C(:NPH)NHNH SUB2 (III). THE REACTION OF BZCL WITH III
GAVE MEC(:NNHBZ)C(:NNHC SUB6 H SUB4 X) C(:NPH)NHNHBZ.   FACILITY:
INST. ORG. KHIM., KIEV, USSR.

USSR

UDC 632.95

PROTOPOPOVA, G. V., NESTERENKO, N. I., NESYNOV, Ye. P., BESPROZVANNAYA, M. M., and PEK'KIS, P. S.

"Insecticide Activity of Some Arylhydrazones and Aryl Esters E of Iminothio-acids for Rice Weevils and for Grain and Chard Aphids"

Abstract: Insecticidal properties of the compounds $PhN=C(CN)SC_6H_4R$ (compound I), $PhN+C(NHPh)SC_6H_4R$ (compound II), $(EtOOC)_2C=NNHC_6H_4R$ (compound III), and the 2-arylthiobenzazols were determined. The highest insecticidal activity for the rice weevils was shown by I (R = p-Me), 67% mortality for a 1% concentration; I (R = p-Br), 94% mortality; II (R = m-Cl), 100% mortality; 2-parachlorophenylthiobenzothiazole, 95% mortality for a 0.1% concentration; and III (R = o-OMe), 100% mortality. It should be noted that for the stereoisomers, the insecticidal properties are stronger for the β-form than the α-form.

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1/2   022   UNCLASSIFIED   PROCESSING DATE---27NOV70
TITLE--ON CHANGES OF THE THROMBOCYTARY FORMULA IN PATIENTS WITH MALIGNANT
  NEOPLASMS -U-
AUTHOR--BESPROZVANNYKH, L.I.

COUNTRY OF INFO--USSR

SOURCE--VOYENNO=MEDITSINSKIY ZHURNAL, 1970, NR 3 P 124

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--THROMBOCYTE, CANCER, NEOPLASM, BONE MARROW, HEMOGLOBIN,
  ERYTHROCYTE, LEUKOCYTE, SEDIMENTATION, STOMACH, SARCOMA, REPRODUCTIVE
  SYSTEM, SURGERY, CHEMOTHERAPY, RADIOTHERAPY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/0423   STEP NO--UR/0177/70/000/003/0124/0124

CIRC ACCESSION NO--AP0135892
                    UNCLASSIFIED

CIRC ACCESSION NO--AP0135892

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MANY INVESTIGATORS SAY THAT
  CHARACTERISTIC CHANGES OF THE THROMBOCYTES IN MALIGNANT NEOPLASMA ARE
  DEGNERATION OF THE MEGAKARYOCYTES OF THE BONE MARROW, INCREASE IN THE
  CONTENT OF "OLD" FORMS OF THROMBOCYTES IN THE BLOOD, AND WELL EXPRESSED
  ABSOLUTE AND RELATIVE THROMBOCYTOSIS.   WE HAVE STUDIED THE
  THROMBOCYTARY FORMULA IN 20 MEN WITH MALIGNANT TUMORS AVRIOUSLY LOCATED,
  IN 46 WITH NONMALIGNANT DISEASES AND IN 40 PRACTICALLY HEALTHY MEN. THE
  HEMOGLOBIN, ERYTHROCYTES, LEUCOCYTES AND ERYTHROCYTE SEDIMENTATION
  REACTION WERE DETERMINED SIMULTANEOUSLY. OF THE 20 MEN WITH MALIGNANT
  NEOPLASMS FOUR HAD CONCER OF THE STOMACH, FOUR HAD SARCOMA VARIOUSLY
  LOCATED, 4 HAD CANCER OF THE GENITOURINARY ORGANS, 3 OF THE RECTUM, 3 OF
  THE MAMMARY GLAND, AND 2 CANCER OF THE LUNGS. OF THEM 11 HAD UNDERGONE
  RADICAL OPERATION, SIX PALLIATIVE, AND THREE HAD RECEIVED MEDICAL
  THERAPY AND RADIATION THERAPY.

UNCLASSIFIED

Coatings

USSR

UDC 621.763

FRANTSEVICH, I. N., KARPINOS, D. M., BESPYATYY, V. A., BESPYATYY, A. A., and REPECHENKO, G. A., Institute of Problems of Material Sciences, Academy of Sciences Ukrainian SSR; Zaporozh'ye "Kommunar" Automobile Plant

"Barrier Coating on Tungsten Fibers for Reinforced Nickel-Base Compositions"

Abstract: The potentials of metal-base reinforced compositions appear to be limited due to the problem of stability of this class of materials, particularly by the stability of the interphase boundary of the composition at high temperatures. This study concerns a new technology of applying an antidiffusion coating to tungsten fibers as well as its reinforcing properties in a nickel-base composition. The experiment involved a WAl_{12} compound applied by spraying in vacuum to tungsten fibers. The compound was

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USSR

FRANTSEVICH, I. N., et al., Poroshkovaya Metallurgiya, No 10, Oct 70, pp 38-43

found to provide a stable interphase boundary in a nickel-base composition at 1200° C for a minimum of 100 hours and at 1100°C for a minimum of 300 hours. The findings were confirmed by microstructural x-ray spectral analysis of the interphase boundary in a WAl_{12} coating applied in 0.01-mm layers. Use was made of an MAR-1 microanalyzer to study the tungsten distribution in the composition along the interphase boundary after various durations of heat treatment.

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- 4 -

USSR   UDC 621.762.4.044.2

KARPINOS, D. M., BESPYATYY, V. A., SUKHIKH, L. L., SHIYANOVSKAYA, I. YE.,
and BESPYATYY, A. A., Institute of Problems of Material Sciences, Academy
of Sciences UkrSSR, Zaporozh'ye Aluminum Plant "Kommunar"

"Some Properties of Reinforced Cylindrical Shells"

Abstract: The described technological schema of the formation of cylindrical
shells includes the explosive squeezing with subsequent heat treatment
(heating up to 850° C and 50 min aging) of a composite consisting of a plastic
matrix in the form of a foil on a nickel base and reinforcing tungsten fibers,
0.03 mm in diam., in the form of a grid. The results of an investigation of
the high-temperature short-duration strength of the shells show that the short-
duration strength of the composite at 800, 950, and 1100° C considerably
exceeds the strength of the matrix. At 950° C the strengthening effect of
the composite reaches 6, at 1100° C it reaches 12, with a simultaneous decrease
in plasticity properties. After heat treatment the composites reveal thermal
stresses which develop from the difference in the linear elongation and the
elastic constants of the components of the composite.

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Coatings

USSR   UDC 621.763

FRANTSEVICH, I. N., KARPINOS, D. M., BESPYATYY, V. A., BESPYATYY,
A. A., and REPECHENKO, G. A., Institute of Problems of Material
Sciences, Academy of Sciences Ukrainian SSR; Zaporozh'ye
"Kommunar" Automobile Plant

"Barrier Coating on Tungsten Fibers for Reinforced Nickel-Base Compositions"

Abstract: The potentials of metal-base reinforced compositions appear to
be limited due to the problem of stability of this class of materials,
particularly by the stability of the interphase boundary of the composition
at high temperatures. This study concerns a new technology of applying an
antidiffusion coating to tungsten fibers as well as its reinforcing proper-
ties in a nickel-base composition. The experiment involved a WAl_{12} com-
pound applied by spraying in vacuum to tungsten fibers. The compound was

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USSR

FRANTSEVICH, I. N., et al., Poroshkovaya Metallurgiya, No 10, Oct 70, pp 38-43

found to provide a stable interphase boundary in a nickel-base composition at 1200° C for a minimum of 100 hours and at $1100^{\circ}C$ for a minimum of 300 hours. The findings were confirmed by microstructural x-ray spectral analysis of the interphase boundary in a WAl_{12} coating applied in 0.01-mm layers. Use was made of an MAR-1 microanalyzer to study the tungsten distribution in the composition along the interphase boundary after various durations of heat treatment.

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USSR   UDC 621.763

KARPINOS, D. M., and BESPYATYY, V. A., Institute of Problems of Material
Science, Academy of Sciences UkrSSR

"Studies of the Disintegration of the Reinforcement Composition on a Nickel
Base"

Poroshkovaya Metallurgiya, No 4(100), Apr 71, pp 69-73

Abstract: Inspection of samples of composites of nickel reinforced by tung-
sten fibers showed that internal disintegration occurred upon loading which
was not caused by macroscopic deformation. A study was made to determine
the process of disintegration in an early state, pointing up the factors
affecting the kinetics of this process, and to determine the degree of damage
to the reinforced composite under elastic load. Samples with different
amounts of reinforcing fibers and a nickel matrix alloyed with tungsten or
chromium were tested under a constant linear load at room and elevated tem-
peratures.
    Under load in the elastic region, the reinforced composite shows a
breakdown of the fibers. The stability of the reinforced composite essenti-
ally is affected by the uniformity of distribution of the wires in the matrix
cross section. Irregular distribution increases the number of points of dis-
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USSR

KARPINOS, D. M., and BESPYATYY, V. A., et al.m Poroshlovaya Metallurgiya,
No 4(100), Apr 71, pp 69-73

integration in the elastic region of load.. Increased temperatures increase
the lengthwise transfer of the load from the matrix to the fibers and
decrease the number of broken wires.

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1/2   050   UNCLASSIFIED   PROCESSING DATE--13NOV70
TITLE--MEASUREMENT OF THE ELECTRON TEMPERATURE IN A BEAM PLASMA DISCHARGE
  LASER ON THE BASIS OF THE BREMSSTRAHLUNG X RADIATION SPECTRUM -U-
AUTHOR-(05)-GADETSKIY, M.P., BOLOTIN, L.I., TKACH, YU.V., BESSARAB,
  YA.YA., MAGDA, I.I.
COUNTRY OF INFO--USSR

SOURCE--UKRAINS'KII FIZICHN II ZHURNAL, VOL. 15, APR. 1970, P 662-664

DATE PUBLISHED----APR70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--MEASUREMENT, ELECTRON TEMPERATURE, LASER, BREMSSTRAHLUNG, X
  RADIATION, PLASMA DISCHARGE, PLASMA BEAM, POPULATION INVERSION,
  RADIATION SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/0658   STEP NO--UR/0185/70/015/000/0662/0664

CIRC ACCESSION NO--AP0128195
                    UNCLASSIFIED

CIRC ACCESSION NO--AP0128195

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INVESTIGATION OF THE PARAMETERS OF
A HIGH ENERGY GROUP OF PLASMA ELECTRONS IN A LASER BASED ON A BEAM
PLASMA DISCHARGE. THIS GROUP ARISES DUE TO THE ACCELERATION OF
ELECTRONS BY HIGH FREQUENCY FIELDS EXCITED IN THE PLASMA. THE
TEMPERATURE OF ELECTRONS IN THE GROUP IS MEASURED BY THE SPECTRUM OF THE
BREMMSTRAHLUNG X RADIATION TO BE BETWEEN 0.8 AND 1 KEV, WHILE THE NUMBER
OF CONSTITUENT PARTICLES IS 10 BILLION PER CU CM, AS MEASURED BY THE
ABSOLUTE INTENSITY OF X RAY EMISSION. THE TEMPERATURE AND DENSITY ARE
SUFFICIENT FOR CRITICAL POPULATION INVERSION IN THE PULSED MODE OF
OPERATION OF THE LASER.   FACILITY: AKADEMIIA NAUK UKRAINS'KOI
RSR, FIZIKO-TEKHNICHNII INSTITUT, KHARKOV, UKRAINIAN SSR.

UNCLASSIFIED

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USSR

UDC: None

TKACH, Yu. V., FAYNBERG, Ya. B., BOLOTIN, L. I., BESSARAB, Ya. Ya., GADETSKIY, N. P., MAGDA, I. I., and SIDEL'NIKOVA, A. V.

"Laser Using Plasma-Beam Discharge"

Moscow, Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, vol 62, No 5, 1972, pp 1702-1716

Abstract: Experiments to investigate the generation of stimulated radiation in the visible range of the spectrum are described. In the equipment described in this paper a pulsed electron beam with a pulse width of 90 μs at a current of 35 amp and an energy of up to 40 kev was injected into a stainless steel plasma chamber with a diameter of 110 mm and a length of three meters. At the end of the chamber a water-cooled collector was placed for dissipating the beam power, reaching a level of as much as 1.5 kW. A block diagram of the equipment and an explanation of its operation given. These experiments demonstrated the possibility of using collective processes in a high-temperature plasma for pumping gas lasers; it is asserted, in fact, that this type of pumping in a plasma-beam discharge is best for obtaining oscillation in the shortwave end of the visible range. The authors, members of the Physico-Technical Institute of the Ukrainian Academy of Sciences, express

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USSR

UDC: None

TKACH, Yu. V., et al, *Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki*, vol 62, No 5, 1972, pp 1702-1716

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USSR   UDC   621.314.26

DOLMATOV, R. G., GRIGOR'YEV, V. S., BESSARABOV, G. V., ZUYEV, V. N., Taganrog
Radio Engineering Institute

"A Converter of the Mean Frequency of a Random Pulse Train"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki,
No 3, Jan 71, Author's Certificate No 291220, Division G, filed 4 Aug 69,
published 6 Jan 71, p 124

Translation: This Author's Certificate introduces a converter of the mean
frequency of a random pulse train. The device contains a flip-flop, switches,
a shaper, two voltage sources of different polarity, and an integrating
amplifier. As a distinguishing feature of the patent, the reliability of
the converter is improved by including a threshold device whose output is
connected to the inputs of the shaper and flip-flop and to the controlling
input of one of the switches, through which the input of the entire device
is connected to the second input of the flip-flop. The sources of voltage
of opposite polarity are connected through the corresponding switches to the
inputs of the integrating amplifier. The output of the amplifier is con-
nected to the input of the threshold device.
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USSR

UDC   681.325.65

KONDALEV, A. I., BESSARABOV, N. V.

"Optimum Structures of a Class of Analog-Digital Converters"

Taganrog, Region. nauch.-tekhn. seminar po stat. analizu, modelir. i avto-
matiz. kontrolya ob"yektov s konstrukt. slozhn. strukturoy--sbornik (Regi-
onal Scientific and Technical Seminar on Statistical Analysis, Modeling and
Automated Monitoring of Objects With a Structurally Complex Design--collec-
tion of works), vyp. 6, 1972, pp 43-49 (from RZh-Avtomatika, Telemekhanika
i Vychislitel'naya Tekhnika, No 11, Nov 72, abstract No 11B306)

Translation: The paper deals with problems of minimizing equipment by in-
creasing the dimensionality of the memory in analog-digital functional con-
verters with a large number of modules. A method is outlined for analyzing
and synthesizing converters by means of subregions -- projections of weight-
ing functions and their generating functions on the region of input vari-
ables. This method is applicable to any analog-digital and analog functional
converters with assignment of the function at node points or in separate sub-
regions of arbitrary dimensionality. Four illustrations, bibliography of
three titles. L. P.

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USSR

UDC 681.3.001:51

KONDALEV, A. I., BESSARABOV, N. V.

"Optimizing the Parameters of Functional Converters With Smoothing by Auxiliary Signals"

V sb. Metody mat. i fiz. modelir. i optimiz. parametrov radioelektron. apparatury (Methods of Mathematical and Physical Modeling and Optimization of the Parameters of Radio Electronic Equipment--collection of works), No 1, Moscow, 1972, pp 116-119 (from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 9, Sep 72, Abstract No 9B445)

Translation: The authors consider a functional converter of a single variable which reproduces the function F and which realizes additional smoothing by a kernel. It is noted that a very extensive class of kernels can be obtained merely by smoothing with auxiliary signals. Two illustrations, bibliography of two titles. V. D.

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USSR

BESSEREZHNOV, A. S.

"Method of Producing Insecticide Extracts from Tobacco Plants"

USSR Author's Certificate No 301148, filed 2/03/70, published 24/06/71.
(Translated from Referativnyy Zhurnal Khimiya, No 5, Moscow, 1972, Abstract
No 5N619 by T. K. Yudovskaya)

Translation: Tobacco plants or wastes are steeped simultaneously in two
solutions — in an acid solution and a solution of Na_2CO_3 at 40-60° in sealed
containers for 3-8 hr, then both extracts, after separation from the cellulose,
are combined. Two hundred kg tobacco waste is ground to particles measuring
1-5 mm and placed in two containers, 100 kg in each, 100 l warm water (40-50°)
is poured into each one and 4.24 kg Na_2CO_3 is poured into one container, 5.04
l 98-100 % HNO_3 in the other container and stirred for 5-10 min. After 3-8 hr
(when the specific gravity of the extracts reaches 1.013-1.020), the extracts
are separated from the cellulose in a press or centrifuge, poured together
and mixed. The product is 300-320 l of a finished product of the following
composition (in %): dry matter 7-10, nicotine 1.0-1.5, protein 6-10, hydro-
carbons 10-20, pectines 10-18, other material 6-9, remainder water, pH 6-7.
The $NaNO_3$ side product produced upon neutralization is used as fertilizer.
1/1

USSR   UDC: 681.32.001

BELEVTSEV, A. T., BESSHAPOSHNIKOV, Ye. A., YEFIMOV, V. P., MUZALEV, Ye. Yu.,
SEMENOV, B. A., CHIZHIK, S. P.

"Resistive Element for a Potentiometer"

USSR Author's Certificate No 293271, filed 1 Aug 69, published 11 Mar 71
(from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 10, Oct
71, Abstract No 10B148 P)

Translation: This Author's Certificate introduces a resistance element for
a potentiometer. The element is made in the form of two layers applied in
sequence, one of them being a layer of rhodium. For the purpose of thermal
stabilization of the resistance, the element utilizes a heat-treated chromium
film as the rhodium sublayer. One illustration.

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USSR

CHIGRIN, V. V., BESSMEL'TSEVA, L. M., POLYAKOVA, G. D., and ALESHIN, Ye. P.,
North Caucasus Scientific Research Institute of Phytopathology, Krasnodar

"Enzymatic Activity in Dormant and Germinating Uredospores of Puccinia
graminis f. tritici"

Abstract: Respiratory activity and respiratory rate were determined in moist
uredospores of the agent of wheat stem rust after germination for 18 hours.
The intensity of oxygen uptake by homogenates and intact spores in the presence
of sodium linolate, sodium ascorbate, cytochrome C, phloroglucinol, and gallic,
caffeic, and protocatechuic acids, as well as in the presence of sidium azide
and sodium diethyldithio-carbamate was measured in dormant uredospores before
and 18 hours after the start of germination. Respiration of uredospores sharp-
ly increased when they were moistened but decreased after 18 hours' germination
to the rate of dormant spores. These changes in respiratory rate indicate that
in the course of germination fats are utilized first and then carbohydrates.
Copper-containing terminal oxidases play an important part in oxygen uptake
by the uredospores, and the activity of these enzymes increases appreciably
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USSR

CHIGRIN, V. V., et al, Sel'skokhozyaystvennaya Biologiya, Vol 5, No 4, 1970, pp 591-594

during germination. The ability of the spores to oxidize caffeic and proto-catechuic acids and the large quantity of these acids in the spores suggest that there is an alternative mode of terminal oxidation through the polyphenol-polyphenoloxidase system.

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USSR

BESSMERTNYKH V.N., RENCH, YE.I.

"Computation Of The Temperature Of The Collector Wall Of Type O Microwave Power Devices"

Translation: On the basis of an approximation of the distribution of specific dissipation power along the generating inner cavity of the collector, a computation is made by exponential and linear functions of the wall temperature of the collector, which makes it possible to evaluate the wall temperature at an early stage of planning of the collector. Measurements of the temperature in an actual collector showed good agreement with the results of computation. The error of the computation does not exceed 10 percent. 7 ref. Summary.

1/1

1/2   021   UNCLASSIFIED   PROCESSING DATE--30OCT70
TITLE--STRUCTURAL CHANGES IN MACROMOLECULES OF
  POLY,4,VINYL,N,ISOAMYLPYRIDINIUM BROMIDES -U-
AUTHOR-(05)-KIRSH, YU.E., BESSMERTNAYA, L.YA., TORCHILIN, V.P., PAPISOV,
  I.M., KABANOV, V.A.
COUNTRY OF INFO--USSR

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CIRC ACCESSION NO--AT0125367
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CIRC ACCESSION NO--AT0125367
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ALKYLATION OF
  POLY(4,VINYLPYRIDINE) WITH ISOAMYL BROMIDE GAVE
  POLY,(4,VINYL,N,ISOAMYLPRIDINIUM BROMIDE) (I) CONTG. VARIOUS AMTS.
  (ALPHA) OF THE TERTIARY N ATOMS. THE CHANGES OF THE INTRINSIC VISCOSITY
  OF I IN WATER (OBTAINED BY EXTRAPOLATION OF THE REDUCED VISCOSITY (ETA)
  AT I CONCN. LESS THAN 0.01 G-DL. ONLY, SINCE ABOVE THAT CONCN. ETA
  BEGINS TO DECREASE) INDICATE THAT I MOLS. COIL UP AT THE LOW ALPHA
  VALUES, BECOMING SMALLEST AT ALPHA 12.2PERCENT, AND THEN BEGIN TO UNCOIL
  WITH ALPHA INCREASE LESS THAN OR EQUAL TO 40PERCENT. THESE RESULTS WERE
  CONFIRMED ALSO BY THE CHANGES OF I ELECTROPHORESIS RATE WITH ALPHA.
    FACILITY: MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

Publications

USSR   UDC 636.619

SHISHKOV, V. Ye., BESSMERTNYKH, A. A., and MUSTAFAYEV, G. A.

Profilaktika i Likvidatsiya Yashchura (Prophylaxis and Eradication of Foot-and-Mouth Disease), Moscow, Rossel'khozizdat," 1971, 64 pp

Translation:

1/1

BESSONENKO, V.V.

public health

DEVELOPMENT OF AN AUTOMATED SYSTEM OF MANAGEMENT OF URBAN EPIDEMIOLOGICAL SERVICE

[Article by V.V. Bessonenko, M.N. Tsinker, V.I. Slutskiy, N.A. Osintseva, Novokuznetsk Municipal Health Department (headed by V.V. Bessonenko) and Chair of Social Hygiene and Public Health Organization (headed by M.S. Tsinker, candidate of medical sciences), Novokuznetsk Institute for the Advanced Training of Physicians (vice-chancellor: Professor G.L. Starkov); Moscow Sovetskoye Zdravookhraneniye, Russian, No 12, 1971, submitted 4 May 1971, pp 42-45]

Epidemic control work and, in particular, control of intestinal infections occupies a special place in the public health system. For prompt and complete detection and decontamination of the source of infection, establishment and neutralization of means of transmission of the pathogen, public health organizers must concentrate maximum attention on development of new and more effective methods in medical service work.

In 1969, the Novokuznetsk Municipal Health Department determined to optimize the information system with respect to incidence of intestinal infections. Under the supervision of V.I. Slutskiy, candidate of medical sciences and senior instructor at the Novokuznetsk Institute for the Advanced Training of Physicians, new approaches have been developed for investigation of the epidemic process and organization of supply of information at different levels of management. Prototypes of epidemiological examination cards have been created which permit gathering fuller and more objective information. A change in the method of gathering information involving mandatory interview with the patient himself while in the hospital, made it possible to obtain important information pertaining to the epidemiologist, by a specially assigned assistant, pertaining to the probable circumstances involved in the infection.

The results of sanitary-bacteriological examination of environmental objects are recorded in a formal document. This document facilitates quantitative evaluation of the degree of contamination which is of great interest for correlation analysis.

All information pertaining to intestinal infections is concentrated in a specially created service, the Laboratory of epidemiological analysis, to which it is forwarded by telegram. The information gathered in the form of

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